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ABSTRACT

The research summaries in this monograph provide a discussion of play in young children as well as examinations of differences, values, and interventions associated with children's play. Following an introduction to the topic, four articles examine differences in children's play: two articles focus on sex stereotyping in preschoolers' child-selected play activities, and two discuss sociodramatic play among, respectively, Mexican-American and Black 3- and 4-year-olds. Concerning values, three articles examine the relationships between cognitive levels of play and child-selected play activities, play level and language use, and group play and verbal intelligence test performance by preschool- or kindergarten-age children. With regard to intervention, the final article discusses the effects of modeling on the sociodramatic play of kindergarten and first-grade children enrolled in a Title I elementary school. Several of the studies evolve from the work of Smilansky (1968): two utilize this researcher's identification of four levels of play, while three examine aspects of her concept of sociodramatic play. Each summary reports purpose, procedure, findings, and conclusions. (RH)

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MONOGRAPH OF PLAY RESEARCH

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I.

INTRODUCTION TO THE PLAY OF YOUNG CHILDREN

R. Ann Williams

The crucial role of play in the development of young children is widely recognized (Lindberg, 1971; Hartley, 1971; Bruner, 1975). Therefore, it is vital that parents, early childhood educators, and others who work with young children develop an understanding of play and its contribution to the growth process. Bower (1974: 21) cautions, "Understanding the atom bomb is, the saying goes, child's play compared to understanding child's play."

Definitions of Play

The complexity of understanding play begins with trying to define play. *Webster's Third International Dictionary* (1968) lists over ninety definitions of *play*. This leads to the obvious conclusion that "there is as yet no generally accepted definition of what play really is or what it does" (Sutton-Smith, 1967: 362). Perhaps, as Berlyne (1969) suggests, it might be better to give up the term *play* altogether because it stands for so many things.

Many people would define play as the opposite of work. However, what is one person's work is another's play. For example, when a ten-year-old boy plays baseball it is play, but when Pete Rose plays baseball it is work. Neumann (1971) places work and play on a continuum and establishes criteria for determining whether an activity is play or work. Play is distinguished from work as follows:

play	work
internal control	external control
internal reality	external reality
internal motivation	external motivation

However, Neumann concludes that an activity is seldom either play or work but usually falls between the two.

Since play is so important, the lack of a precise definition should not prevent our study of it (Weisler and McCall, 1976). Singer (1973), in fact, contends that it is worthy of intense, rigorous, scientific study.

Theories of Play

If defining play is troublesome, so is reviewing the theories of play. Ellis (1973) discusses fifteen theories of play. However, each theory is inadequate in that it either fails to explain all aspects of play behaviors or lacks data to support it. Ellis believes that three theories (the arousal-seeking, the learning, and the developmental) must be integrated to adequately answer the question, "Why do people play?"

The arousal-seeking theory contends that man needs to be optimally aroused by stimuli in an environment that is novel, complex, or dissonant. When man's need for arousal is not met through his work, he plays to meet this need. In the learning theory, the child learns to play by acting to increase pleasant experiences and decrease unpleasant ones. And in the developmental theory, stages of play are tied to the developmental stages of intellect. Play produces increased intellectual complexity.

Differences in Play

The next question after "Why do people play?" is "How do they play?" How a child plays depends on a number of variables, such as the child's age, sex, socioeconomic status, and cultural/ethnic background.

Hurlock (1964) describes various age differences, such as a decrease in the number of play activities as children grow older. Although the time spent in play decreases with age, the time spent on specific play activities increases. The play of young children is informal and spontaneous, while the play of older children is formal and planned. Parten (1932, 1933) proposes a developmental sequence of social play: onlooker, solitary,

parallel, associative, and cooperative play. Her studies confirm that the child's level of social play increases with age and follows the hierarchic sequence.

Sex differences are reported in the play of infants (Lewis, 1972) as well as preadolescents (Erikson, 1951). Sutton-Smith and Rosenberg (1971) review studies of boy-girl game preferences. Through the years, boys have played games traditionally considered "masculine" and girls have played games traditionally considered "feminine." They conclude that, in the last thirty years, the differences between the sexes have been reduced considerably. There are sex differences in fantasy play (Tizard et al., 1976; Sanders and Harper, 1976). Girls display domestic themes, while boys pretend to drive cars, trains, or airplanes. Sex differences are reported in terms of sociability. Girls are more socially oriented in play than boys (Coates et al., 1975). Boys show a stronger preference for the same-sex playmate than do girls (Clark et al., 1969).

Smilansky (1968) examines socioeconomic differences in children's dramatic and sociodramatic play. Middle-class children engage in significantly more dramatic and sociodramatic play than do lower-class children. The findings of Rubin et al. (1976) indicate that middle-class children are involved in significantly more associative and cooperative play and that lower-class children are involved in more parallel play.

Certain elements of play are common across cultures (Baker, 1977). Children have been observed playing house in India (Roy, 1973), in an Alaskan Eskimo village (Ager, 1974), and in an African village (Leacock, 1971). In a comparative study of children's play in America and Japan, many similarities in age, sex, and rural-urban patterns are reported (Seagoe and Murakami, 1961). However, differences in the two cultures are also found. The play of Japanese children emphasizes informal group activities and, to a lesser degree, individual competitive sports. The play of American children includes more team sports and much greater age differentiation.

Intra-cultural differences are often more pronounced than cross-cultural differences (Seagoe and Murakami, 1961). Seagoe's (1971) study of play in three American subcultures reveals that Mexican-American and black boys are slightly lower in play socialization than Caucasian boys. Mexican-American girls are similar to Caucasian girls in play socialization. Black girls have high play socialization scores until age eight and then fall markedly lower in late childhood compared to Caucasian girls.

Values of Play

How does play contribute to cognitive, language, and social-emotional development? Various aspects of cognitive growth are attributed to play. Cognitive processes such as attending, perceiving, remembering, recognizing, and focusing are developed through play (Hartley, 1971). Further, children learn to identify, generalize, classify, order, reason, and perceive relationships during their play (Medice, 1976). Dramatic play enhances problem-solving ability in preschool children (Sylva et al., 1976) and in primary grade children (Hartshorn and Brantley, 1973). Divergent thinking is related to fantasy play in preschool children (Johnson, 1976). Moffitt (1972) describes play activities which are related to perceptual development and to academic achievement in the elementary school.

If language development and cognitive development are interdependent, as Piaget (1962) proposes, then play should be related to language development as well as to cognitive development. The findings of Goodson and Greenfield (1975) and Largo and Howard (1979) support this relationship between language development and play behaviors. Further evidence is provided by studies in which play training programs increased the language abilities of disadvantaged preschool children (Smilansky, 1968; Lovinger, 1974).

Rush (1977), in a review of the value of play for social and emotional growth, contends that play allows children to release inner emotions in constructive ways. Children often feel powerless in the adult-oriented society, but in their play build feelings of strength, confidence, and autonomy (Caplan and Caplan, 1973). Play serves as an agent for learning social values, such as learning to share and to take turns (Scarfe, 1974). In play, children are often forced to take the wishes and feelings of others into consideration, thus lessening their egocentrism (Arnaud, 1974). Even in rough and tumble play, important messages such as "I like to be with you" are transmitted non-verbally (Donaldson, 1976).

Intervention of Play

Can intervention facilitate and enhance children's play abilities? The answer appears to be yes based on studies of Smilansky (1968, 1971). In training programs utilizing adults as teachers of play, there were significant improvements in the level of sociodramatic play of disadvantaged preschoolers in Israel and the United States.

What are the outcomes from play intervention? Cognitive benefits include an increase in the number of cognitive constructs (Ghiaci and Richardson, 1980) and the generation of new cognitive structures (Fink, 1976) resulting from play training programs. When Rosen (1974) provided instruction and practice in sociodramatic play, there was significant improvement in the problem-solving abilities of disadvantaged preschool children. The data of Saltz et al. (1977) showed that training in thematic-fantasy play produced increases in intellectual performance as measured by standard IQ tests.

Other aspects of development have also been augmented through play training programs. A program of constructive and dramatic play training produced improvement in perceptual, cognitive, and affective perspective-taking performance (Burns and Brainerd, 1979). Training in thematic-fantasy play increased both the ability to delay impulsive behavior and the ability to empathize with other children under specified conditions (Saltz et al., 1977). Play tutoring in thematic play resulted in improved performances on conventional tests of innovative and original behavior (Feitelson and Ross, 1973). As mentioned earlier, disadvantaged preschoolers showed an increase in the use of language as a result of training in sociodramatic play (Smilansky, 1968; Lovinger, 1974).

Further Questions

The studies that follow in this monograph provide additional insights into the play of young children. Several of the studies evolve from the work of Smilansky (1968). Two of the studies utilize her four levels of play. The levels of play are described as follows:

> **1. Functional Play.** The child is involved in simple muscle movements, repetitious actions, or nondiscriminate play with toys or equipment.
>
> **2. Constructive Play.** The child uses play materials to create or build something or uses play materials or equipment in an appropriate manner.
>
> **3. Dramatic Play.** The child substitutes an imaginary situation that satisfies his needs or purposefully uses an object for something other than what it is.
>
> **4. Games-with-rules.** The child accepts and adjusts to prearranged rules of a game.

Three of the studies examine aspects of Smilansky's sociodramatic play. In dramatic play, the child takes on a role; that is, he pretends to be

someone else. When the dramatic play is conducted in cooperation with at least one other role player, it becomes sociodramatic play. The participants interact with each other both in actions and words during sociodramatic play. Smilansky identifies the following six elements of sociodramatic play:

> **1. Imitative role play.** The child undertakes a make-believe role and expresses it in imitative action and/or verbalizations.
>
> **2. Make-believe in regard to objects.** Movements or verbal declarations are substituted for real objects.
>
> **3. Make-believe in regard to actions and situations.** Verbal descriptions are substituted for actions and situations.
>
> **4. Persistence.** The child persists in a play episode for at least ten minutes.
>
> **5. Interaction.** There are at least two players interacting in the framework of the play episode.
>
> **6. Verbal communication.** There is some verbal interaction related to the play episode.

Has the non-sexist movement affected the sex stereotyping previously reported in the play of young children? Are there differences in sociodramatic play among children in American subcultures? What is the relationship of specific play activities to language and cognitive development? Is peer modeling an effective approach to play intervention? This monograph will examine these questions. As Smilansky (1968: 44) concludes, "A great deal of systematic research is needed in order to understand play."

II.

DIFFERENCES IN THE PLAY OF YOUNG CHILDREN

Sex Stereotyping in Child-Selected Play Activities of Preschool Children

Betty Spillers Beeson and R. Ann Williams

Some of the earliest empirical research conducted in the study of play focused on sex differences (Sutton-Smith and Rosenberg, 1971). Those early studies and many that followed throughout the years gave evidence of societal pressures for children to play in sex-appropriate ways.

What effect has the movement to eliminate sexism in our society had on sex stereotyping of children's play? When Rubin's (1977) findings on the play preferences of boys and girls corroborated those of Parten (1933), he concluded there had been little change in the sex stereotyping of children's play in the last forty years even with the recent emphasis on non-sexism.

Perhaps Rubin's (1977) study came too early in the non-sexist movement to detect observable changes in sex stereotyping of children's play. After all, societal attitudes change slowly. With more time, would sex differences in children's play diminish?

Purpose

The purpose of the study was to examine sex differences in child-selected play activities of three-, four-, and five-year-old children.

Procedure

The fifty subjects were enrolled in preschool programs at a midwestern university. The twenty-five males and the twenty-five females ranged in age from thirty-six to sixty-four months.

Six child-selected play activities were selected from Rubin's (1977) list of the ten most frequently observed preschool activities. Findings of previous research had revealed consistent sex differences for many of these play activities (see Table 1). Three were designated male-oriented: wheeled vehicles, sand/water, and blocks. Three were designated female-oriented: art projects, house play, and table activities.

TABLE 1

PREVIOUS STUDIES REPORTING SEX DIFFERENCES IN PLAY ACTIVITIES OF YOUNG CHILDREN

Study	Sex	Findings
Rubin (1977)	Males	Blocks, wheeled vehicles
	Females	Art activities
Tizard, Philps, & Plewis (1976)	Males	Tires, crates, wheeled vehicles
	Females	Climbing frame
Harper & Sanders (1975)	Males	Sand, tractor, climbing frame
	Females	Arts & crafts
Coates, Lord, & Jakabovics (1975)	Males	Blocks
	Females	Dolls, formal games
Cramer & Hogan (1975)	Males	Blocks, vehicles
	Females	Dolls, furniture
Clark, Wyon, & Richards (1969)	Males	Blocks, wheeled vehicles
	Females	Dolls, art activities
Shure (1963)	Males	Blocks
	Females	Doll area, art
Vance & McCall (1934)	Males	Blocks
	Females	Housekeeping
Parten (1933)	Males	Blocks, trains, kiddie-kars
	Females	Art activities, house play

An observational instrument to record each subject's daily play choices was developed by the researchers. Observers, who were graduate students, were trained to use the instrument.

The subjects were observed for thirty minutes during free play time. The observations were conducted three days a week for six weeks, making a total of eighteen observational periods.

The data were analyzed using multivariate and univariate analyses of variance. The hypotheses were tested at the .05 level of significance.

Findings

There were statistically significant sex differences in the child-selected play activities ($p < .0001$).

Post hoc analysis was then conducted for each of the play activities.

There was a statistically significant sex difference for wheeled vehicles ($p < .01$). Males more than females chose wheeled vehicles as a child-selected play activity.

There was a statistically significant sex difference for sand/water ($p < .05$). Males more than females chose sand/water as a child-selected play activity.

There was a statistically significant sex difference for blocks ($p < .0001$). Males more than females chose blocks as a child-selected play activity.

There was a statistically significant sex difference for art projects ($p < .05$). Females more than males chose art projects as a child-selected play activity.

There was no statistically significant sex difference for house play. Both males and females chose house play as a child-selected play activity.

There was no statistically significant sex difference for table activities. Both males and females chose table activities as a child-selected play activity.

Conclusions

The findings of this study did reveal some changes from those of previous research on sex stereotyping of young children's play.

The three male-oriented play activities remained sex stereotyped. Wheeled vehicles, sand/water, and blocks were selected by significantly more males than females.

Only one of the female-oriented play activities remained sex stereotyped. Art projects were selected by significantly more females than males.

The other two female-oriented play activities were no longer sex stereotyped. House play and table activities were selected by both males and females.

These findings would indicate that play activities for males have changed and expanded, but not for females.

Betty Spillers Beeson and R. Ann Williams are associate professors of elementary education, Ball State University. *This summary was prepared from a research project conducted under a Teachers College Research Grant, Ball State University, 1979-80.*

A Follow-Up of Sex Stereotyping in Child-Selected Play Activities of Preschool Children

R. Ann Williams and Betty Spillers Beeson

Does sex stereotyping of play activities increase with age as suggested by Hurlock (1972)? Does attendance in a preschool program affect sex stereotyping of play activities? The subjects of the first study, who were now six months older and who had attended a preschool program for six months, were utilized to investigate these questions.

Purpose

The purpose of the study is to determine if sex differences in child-selected play activities of three-, four-, and five-year-old children change with age or with attendance in a preschool program.

Procedure

There were forty-seven subjects from the first study, a loss of three subjects. The twenty-four males and twenty-three females were six months older. They ranged in age from forty-two to seventy months old.

The six child-selected play activities of the first study (wheeled vehicles, sand/water, blocks, art projects, house play, and table activities) were examined again. The instrument and schedule of eighteen observational periods of the first study were utilized for this follow-up. The data were analyzed with the same statistical procedures (multivariate and univariate analyses of variance). Again, the hypotheses were tested at the .05 level of significance.

Findings

There were statistically significant sex differences in the child-selected play activities ($p < .01$).

Post hoc analysis was then conducted for each of the play activities.

There was a statistically significant sex difference for wheeled vehicles ($p < .001$). Males more than females chose wheeled vehicles as a child-selected play activity.

There was a statistically significant sex difference for sand/water ($p < .01$). Males more than females chose sand/water as a child-selected play activity.

There was a statistically significant sex difference for blocks ($p < .0001$). Males more than females chose blocks as a child-selected play activity.

There was a statistically significant sex difference for art projects ($p < .05$). Females more than males chose art projects as a child-selected play activity.

There was no statistically significant sex difference for house play. Both males and females chose house play as a child-selected play activity.

There was no statistically significant sex difference for table activities. Both males and females chose table activities as a child-selected play activity.

Conclusions

The findings of this follow-up study are identical to those of the first study. The three male-oriented play activities (wheeled vehicles, sand/water, and blocks) continued to be sex stereotyped. One female-oriented play activity (art projects) continued to be sex stereotyped and two of the female-oriented play activities (house play and table activities) were not sex stereotyped.

Sex stereotyping of young children's play did not change with age or with attendance in a preschool program.

This summary was prepared from a research project conducted under a Teachers College Research Grant, Ball State University, 1979-80.

Sociodramatic Play among Three- and Four-Year-Old Mexican-American Children

M. Liz Christman-Rothlein

Piaget (1952) maintained that all children passed through certain stages of play development. However, Smilansky (1968) found that culturally deprived children, ages three to seven, did not engage in sociodramatic play. Eifermann (1971) reported that all the children in his study did exhibit sociodramatic play, but that lower socioeconomic children may reach the peak of such play at a later age than higher socioeconomic children. This lack of agreement suggested that additional research was needed concerning sociodramatic play of various social and ethnic groups. With the increased interest in the Mexican-American migrant population, this group was selected for study.

Purpose

The purpose of the study was to describe the levels of sociodramatic play among three- and four-year-old Mexican-American migrant children by determining the frequency of play behaviors of these children. In addition, the study was designed to ascertain whether the children's sociodramatic play behavior differed according to the sex and age of the child. The study also investigated if Mexican-American migrant three- and four-year-old male and female children differed in the occurrence of sociodramatic play behavior when in different play group combinations.

Procedure

The forty-eight subjects were selected from day care centers and preschool programs in three cities of a midwestern state. There were twelve subjects in each of the following groups: three-year-old males, three-year-old females, four-year-old males, and four-year-old females.

An observational record was designed to record the six elements of sociodramatic play (Smilansky, 1968). The observers were trained to use the instrument during four in-field training sessions and four field testing sessions. The interrater reliability was .995, computed by the Pearson Product-Moment Correlation technique.

The subjects, in groups of four, were observed while playing in a structured play setting. The setting was prearranged and provided with predetermined play equipment. It was located outside the regular classroom, but within the confines of the center in which data were collected.

The thirty-minute observation time was divided into six five-minute sessions. During each of these sessions, two observers focused attention on one subject and recorded the subject's play behaviors. Following the recording of play behaviors, the frequency of each of the six elements of sociodramatic play was determined for each subject. A total play score across the six sessions was computed for each subject.

The frequencies of play behaviors were descriptively analyzed to describe the levels of play. An analysis of variance on transformed data was used to determine the significance of differences in sociodramatic play according to sex, age, play groupings, and interaction effects among these variables. The hypotheses were tested at the .05 level of significance.

Findings

The frequency of sociodramatic play is described by percentage of occurrence. The following percentages were computed by comparing frequencies of occurrences with total possible occurrences of behavior: three-year-old males engaged in some aspect of sociodramatic play 2.6 percent of the total time possible; three-year-old females, 7.4 percent; four-year-old males, 9.8 percent; and four-year-old females, 9.8 percent.

There was a statistically significant difference in the sociodramatic play of males and females ($p < .02$), with females scoring higher.

There was a statistically significant difference in the sociodramatic play of three-year-olds and four-year-olds ($p < .02$), with four-year-olds scoring higher.

There was no statistically significant interaction effect of age and sex.

There were no statistically significant differences for play group combination: same age, different sex; different age, same sex; same sex, same age; and different age, different sex.

Conclusions

The frequency of sociodramatic play among three- and four-year-old Mexican-American migrant children appeared to be low. The highest level of sociodramatic play was slightly less than 10 percent of the total time possible.

Females displayed significantly more sociodramatic play than males. Four-year-olds engaged in significantly more sociodramatic play than three-year-olds, which reinforced Smilansky's (1968) conclusion that sociodramatic play was a developmental process.

Various play group combinations did not make a significant difference in the sociodramatic play of these children.

In view of the literature supporting the importance of sociodramatic play to cognitive, social, and emotional development of children, the low level of sociodramatic play found among Mexican-American migrant children in this study should be given careful consideration in planning early childhood education programs serving these children. In some settings, a play intervention program might be appropriate.

The difference in level of sociodramatic play between males and females in this study may imply a possible need for some sex differentiations in regard to both the structure of play activities and the objectives of play activities in Mexican-American migrant preschool programs.

M. Liz Christman-Rothlein is an associate professor of elementary education at the University of Miami. This summary was prepared from her unpublished doctoral dissertation, Ball State University, 1975. A review of her study also appeared in Childhood Education *56 (1979): 106-09.*

Sociodramatic Play among Three- and Four-Year-Old Black Children

Pamela Werton Dalton

Sociodramatic play contributes to both children's developmental and learning processes. To plan effective early childhood education programs, there is a need to understand the sociodramatic play of all children. Since more and more black children attend preschool programs, research is needed to describe the sociodramatic play of these children.

Purpose

The purpose of the study was to determine the occurrences of sociodramatic play of three- and four-year-old black children, using the six elements of sociodramatic play identified by Smilansky (1968). The study also examined the relationship between sociodramatic play and age among black children and whether the relationship between sociodramatic play and age was the same for males and females.

Procedure

The forty-eight black subjects selected for the study were drawn from three day care centers in cities of a midwestern state. There were twelve subjects in each of the following groups: three-year-old males, three-year-old females, four-year-old males, and four-year-old females.

The instrument used in the study was an adaptation and refinement of Smilansky's (1968) instrument. Two observers were trained in the use of the instrument. The application of the Pearson Product-Moment Correlation technique produced an interrater reliability on scoring of the play behavior of .94 for six days of observation.

In groups of four, the subjects were observed in a structured play setting. A room was set up with the same equipment in each of the day care centers used in the study.

The two observers focused on one subject, recording the six elements of sociodramatic play. The observations were five minutes a day for six days, providing a total of thirty minutes for each subject by each observer.

The number of subjects engaged in the elements of sociodramatic play was used to describe the occurrence of such play. Univariate and multivariate analyses of variance, covariance, and regression were used to test hypotheses. Sex and age of the subject were the independent variables, and each of the six elements of sociodramatic play was treated as a dependent variable. The hypotheses were tested at the .05 level of significance.

Findings

In the three-year-old group, thirteen of the twenty-four children engaged in all six elements of sociodramatic play while eleven did not. In the four-year-old group, nineteen of the twenty-four children engaged in all six elements of sociodramatic play while five did not.

There was no statistically significant difference in the imitative role play of three- and four-year-old males and three- and four-year-old females.

There was no statistically significant difference in make-believe with regard to objects of three- and four-year-old males and three- and four-year-old females.

There was no statistically significant difference in make-believe with regard to actions of three- and four-year-old males and three- and four-year-old females.

There was no statistically significant difference in persistence during a play episode of three- and four-year-old males and three- and four-year-old females.

There was no statistically significant difference in the interaction of three- and four-year-old males and three- and four-year-old females.

There was no statistically significant difference in the verbal communication of three- and four-year-old males and three- and four-year-old females.

Conclusions

There were no statistically significant age or sex differences in the six elements of sociodramatic play of the black children in this study. Smilansky (1968) found that sociodramatic play was developmental, with older children exhibiting higher levels than younger children. However, in this group of black children, three- and four-year-olds were playing at the same level. Almost one-fourth of the four-year-olds did not engage in all six elements of sociodramatic play. This lack of sociodramatic play development might indicate that intervention should be considered.

Pamela Werton Dalton is a professor of education at Linfield College. This summary was prepared from her unpublished doctoral dissertation, Ball State University, 1975.

III.

VALUES IN THE PLAY OF YOUNG CHILDREN

The Relationship between Cognitive Levels of Play and Child-Selected Play Activities in Younger and Older Preschool Children

Timothy L. Krenzke

What kind of play environment is needed to facilitate productive play? What effect do specific materials have on the play of children? What is the relationship of children's sex and age to play activities and levels of play? Although play has been a subject of study since the late nineteenth century, these questions remain unanswered.

Purpose

The purpose of the study was to investigate the relationship between the cognitive levels of play and the child-selected activities of younger and older preschool children. Hypotheses were formulated to examine this relationship and the age and sex differences in the cognitive levels of play and the child-selected play activities.

Procedure

A play observational instrument was developed by the researcher to assess the following: Smilansky's (1968) cognitive levels of play (functional, constructive, and dramatic) and seven play activities (family-work, art, block, wheel toy, table, sand/water, and climbing) from Rubin's (1977) list of the most frequently observed preschool activities. The instrument was the result of several experimental versions used in pilot studies.

The forty-four subjects, twenty-two males and twenty-two females, were enrolled in preschool programs at a midwestern university. The younger group had a mean age of 41.8 months, and the older group had a mean age of 54.0 months.

The training of observers included practice coding play behaviors in preschool classrooms. Agreement among the seven observers, using Cohen's coefficient kappa (correction for chance), was .7564.

Data were collected three days a week for six weeks. Observers coded the play of subjects on the cognitive levels of play and the child-selected play activities during thirty-minute periods.

A multivariate analysis of variance was used to test the hypotheses. Sex and age of the subjects were the classification variables, and the cognitive levels of play exhibited in the seven child-selected play activities were the dependent variables. Post hoc analysis, using a univariate technique, was conducted to further interpret the results. The hypotheses were tested at the .05 level of significance.

Findings

Statistically significant age differences were found for the cognitive levels of play ($p < .0450$): older children engaged in more dramatic play. No statistically significant age differences were found for functional or constructive play.

No statistically significant age differences were found for the child-selected play activities.

No statistically significant sex differences were found for the cognitive levels of play.

Statistically significant sex differences were found for the child-selected play activities ($p < .0001$) and for the child-selected play activities by cognitive levels of play interaction ($p < .0001$).

Sex differences could be interpreted only when examining specific child-selected play activities:

1. No sex difference was observed for family-work play; however, both sexes exhibited higher levels of dramatic family-work play and lower levels of functional and constructive family-work play.
2. Females exhibited higher levels of constructive art play.
3. Males exhibited higher levels of constructive and dramatic block play.
4. Males exhibited higher levels of dramatic wheel toy play.
5. No sex difference was found for table play or sand/water play.
6. Males engaged in more dramatic climbing play.

Statistically significant differences were found for the overall child-selected play activities by cognitive levels of play interaction ($p < .0001$). Post hoc analysis indicated that there was more dramatic family-work play than functional or constructive family-work play, more constructive table play than functional or dramatic table play, and more constructive sand/water play than functional or dramatic sand/water play.

Conclusions

The results of this study help to answer the questions raised in the introduction regarding play environments, materials, and activities.

Since dramatic play has been linked to later symbolic functioning in creativity (Feitelson and Ross, 1973), problem solving (Rosen, 1974), and reading (Wolfgang, 1974), it is important to know which activities have the greatest potential for dramatic play. As determined from examination of the seven child-selected play activities, the highest frequency of dramatic play occurred in family-work play. Thus, a family-work play center, which appeals to preschool children of both sexes, is needed to encourage and sustain dramatic play.

Table play and sand/water play evoked higher frequencies of constructive play than functional or dramatic play. Therefore, the frequent availability of these activities is desirable to encourage constructive play in both sexes.

Art play, block play, wheel toy play, and climbing play tend to evoke sex differences in the cognitive levels of play of preschool children. If non-sexist play is valued, teachers should encourage and reinforce cross-sex play behaviors in these activities.

Teachers of preschool children should carefully select the combinations of child-selected play activities. Careless or random selection, e.g., a combination of art play, table play, and sand/water play, may limit the children's play to the constructive level with little opportunity for dramatic play.

Since there were no significant age differences in the child-selected play activities, there appears to be no justification for designating certain play activities for three-year-olds and other play activities as appropriate for four-year-olds.

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A Description of Play Level and Language Use of Three-, Four-, and Five-Year-Old Children

Betty Jean Davis

In the 1970s there was renewed interest in the role of play in early childhood. At the same time, there was growing interest in pragmatic aspects of language, in particular the way young children use language. Cazden (1980: 595) asserted, "Much of the recent research on language stresses the situational specificity of effective language used." Smilansky (1968) found that language retardation, as a factor of social class, directly affected the ability of young children to engage in sociodramatic play. This suggested that children must be able to use language in certain ways before they could engage in higher levels of play.

However, the relationship between play and language use is probably a cyclic one. That is, the children's use of language enables them to engage in higher levels of play, and the children's participation in higher levels of play encourages the development of their language use. In Smilansky's (1968) research, teaching children to engage in sociodramatic play improved their language abilities. Educators need to have a better understanding of the relationship between play and language use so that educational programs for young children will facilitate and enhance language use in play situations.

Purpose

The purpose of the study was to describe the relationship between language use and play level of three-, four-, and five-year-old children of middle socioeconomic status. In addition, the study was designed to describe age or sex differences in language use and/or play level of the children.

Procedure

The subjects were sixteen children who attended two preschool programs, a nursery school and a day care center, operated by a midwestern

university. The sample of sixteen was selected from a population of fifty-five children through a table of random numbers.

There were three age groups: five subjects were three years old, six subjects were four years old, and five subjects were five years old. Half the subjects were males and half females.

The verbal ability of the subjects was estimated from scores on the *Peabody Picture Vocabulary Test*. It was estimated that 75 percent of the subjects had above-average, 19 percent average, and 6 percent below-average verbal ability.

The socioeconomic status of the subjects was determined through classification of parents' occupation on Featherman and Hauser's (1978) *Socioeconomic Classification*. All the parents' occupations were classified as middle socioeconomic status.

A play observational instrument was developed by the researcher. The four levels of play included functional, constructive, dramatic, and sociodramatic (Smilansky, 1968). The instrument consisted of three parts: (1) Pertinent Information about the Subject; (2) Checklist for Recording Frequency of Play; and (3) Description of the Play.

A language observational instrument was also developed by the researcher. The seven categories of language use included self-maintaining, directing, reporting logical reasoning, predicting, projecting, and imagining (Tough, 1977). The instrument consisted of four parts: (1) Pertinent Information about the Subject; (2) The Play Situation; (3) The Utterance; and (4) Salient Non-Verbal Features.

The instruments were refined and interrater reliability was established during a pilot study. The interrater reliability on both instruments was 1.0.

The data were collected by four trained observers during a six-week period. For each subject, fifty play observations were recorded on the play instrument, and fifty utterances in play situations were recorded on the language instrument.

The frequency and the percent of each play level were given for all subjects, age groups, and sexes. The same procedure was utilized for language use data. Then, the language use in each play level was presented. Further, the language use in six different play situations was given. Examples of the children's utterances during play situations were also presented.

Findings

The findings for play level were as follows:

1. Constructive, dramatic, and sociodramatic play occurred among the three-, four-, and five-year-old subjects in this study. Functional play did not occur.

2. There was not a clear developmental pattern to play levels. Constructive play occurred most often with three-year-olds, sociodramatic play most often with four-year-olds, and dramatic play most often with five-year-olds.

3. Females engaged in more sociodramatic play and males in more constructive and dramatic play.

The findings for language use were as follows:

1. Self-maintaining, directing, reporting, logical reasoning, predicting, and imagining language occurred during free choice play of three-, four-, and five-year-olds in this study. Most frequently occurring were imagining, self-maintaining, directing, and reporting language.

2. All subjects used imagining language most frequently. Next in frequency for three-year-olds was reporting and self-maintaining language; for four-year-olds reporting and directing language; and for five-year-olds directing and reporting language.

3. Females engaged in more self-maintaining, directing, reporting, and logical reasoning. Males engaged in more predicting and imagining language.

The findings for play level and language use were as follows:

1. All six of the language uses occurred in all three of the play levels, except that logical reasoning did not occur in dramatic play.

2. For three- and four-year-olds, imagining language during sociodramatic play was first (most frequently occurring), second was imagining language during dramatic play, and third was reporting language during constructive play. For five-year-olds, the language use in the play level was the same for the first and second most occurring, but the third most frequent was directing language during sociodramatic play.

3. For females, imagining language during sociodramatic play was first (most frequently occurring), second was imagining language during dramatic play, and third was directing language during sociodramatic play. For males, the first and second most frequently observed were the same as for females, but the third most frequent was reporting language during constructive play and directing language during sociodramatic play.

The finding for language use in play situations was as follows:

1. The playhouse, climber, and block situations elicited the most language, while sand/water, table activities, and riding toys elicited the least. The most frequently occurring language uses in the playhouse and the climber situations were imagining, directing, and reporting. The most frequently occurring language uses in the block situation were imagining, directing, and self-maintaining.

Conclusions

This study gave evidence that a variety of language uses occurred within play situations. Therefore, free choice play should be provided in preschool programs to facilitate informal language use development and practice.

The findings revealed that the playhouse, climber, and block situations elicited more language use than other play situations. The preschool classroom should provide these play situations to encourage oral language, particularly imagining language.

Preschool teachers need to be aware of the levels of play and language use so as to facilitate language development of young children.

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Group Play and Its Relation to Performance on a Verbal Intelligence Test in Kindergarten Children

JoAnna Paterno

In the process of education, young students are often tested for intellectual abilities to gain information for placement or remediation. A common element found in instruments measuring intelligence is the use of listening and verbalization either in instructions or in the actual performance skills needed (Stanley and Hopkins, 1972).

How can educators foster verbal and listening growth of young children? One proposed method is to encourage group play where children can practice speaking and listening skills and where children can increase vocabulary and verbal classifications skills.

If a positive relationship is found between group play and verbal intelligence scores, it may be possible to use group play in the prediction, diagnosis, remediation, and curriculum of verbal learning.

Purpose

The purpose of the study was to determine whether a correlation exists between group play and performance on a verbal intelligence test. In addition, the study was designed to investigate group play as a predictor of performance on a verbal intelligence test while controlling effects due to the variables of sex, age, and number of siblings in the family.

Procedure

The subjects were enrolled in kindergarten of a laboratory school of a midwestern university. All the children enrolled in the morning and afternoon programs were considered to be included in the population sample but two restrictions eliminated some of the candidates. Those students who were non-white or absent for ten or more observational days were eliminated. The thirty-two subjects, sixteen males and sixteen females, ranged in age from sixty-two to seventy-seven months.

Two measuring instruments were used to collect data for the study. An observational instrument was developed from the Parten Social Play Scale (Parten, 1932). The social play types from this scale were categorized as non-group play (unoccupied, onlooker, and solitary play) and group play (parallel, associative, and cooperative play). These data were used to measure the number of group play episodes observed for each subject.

A team of three observers was trained to use the observational instrument and a pilot study conducted to establish the interrater reliability. By using Cohen's coefficient kappa, it was established that the observation team had an interrater reliability of .99 when recording non-group/group play and of .81 when recording all six types of social play.

There were twenty observations of thirty seconds each for each subject. Each observation was classified as one of the six social play types and then categorized as non-group or group play.

The other instrument used was the *Peabody Picture Vocabulary Test* (PPVT). The score from this instrument provided an estimate of verbal intelligence of each subject. The PPVT was administered by the researcher within the same time period as the play observation.

A partial multiple regression was the statistical technique used. The hypothesis was tested at the .05 level of significance.

Findings

The partial correlation between group play and performance on a verbal intelligence test, partialling out the effects due to sex, age, and number of siblings in the family, was not statistically significant.

Conclusions

Group play explained very little of the variance in the scores on the verbal intelligence test and had little correlation with performance on the *Peabody Picture Vocabulary Test* when controlling for sex, age, and number of siblings in the family. Results of this study indicated that the use of group play as a predictor of verbal intelligence is questionable.

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IV.

INTERVENTION IN THE PLAY OF YOUNG CHILDREN

The Effects of Modeling on the Sociodramatic Play of Kindergarten and First-Grade Children Enrolled in a Title I Elementary School

Charles D. Weddle

Smilansky (1968) identified three broad areas of child development which may be enhanced through sociodramatic play: intellectual growth, social development, and creativity. However, some lower socioecomonic children engage in little or no sociodramatic play (Smilansky, 1968) or do so at a later age than middle socioeconomic children (Eifermann, 1971; Griffing, 1974).

Research findings indicate that sociodramatic play can be fostered through play training (Smilansky, 1968; Rosen, 1974; Colomb and Cornelius, 1977). However, the play training programs in these studies require the assistance of several adults as play trainers, which may be an unrealistic situation in many public schools. Another possible approach to a play training program would be peer modeling of sociodramatic play. If peer modeling should prove effective, teachers would have a resource for fostering sociodramatic play within their classrooms.

Purpose

The purpose of the study is to investigate the effects of peer modeling on the observed sociodramatic play of kindergarten and first-grade children enrolled in a Title I school.

Procedure

The population for the study was kindergarten and first-grade children enrolled in a Title I school of an industrial city of 100,000 people in the midwest. There were four kindergartens with a total enrollment of 100 and four first grades with a total enrollment of 103.

The sample for the study was 128 subjects, who met the following criteria: had written consent of the parent or guardian to participate in the experiment, had not repeated or were not repeating a grade, and had not been used as models in the experimental treatment condition.

The subjects were assigned to experimental or control conditions through random numbers. There were sixteen subjects in each of eight groups based on grade level, sex, and treatment condition.

To find models with whom the majority of subjects in the experimental group identified in some way, a sociogram was developed. Each subject in the experimental group was asked, "Which child in your classroom do you most enjoy playing with?" The two children, one male and one female, most frequently named were chosen as models. This allowed each subject in the experimental group to be exposed to at least two models familiar to him through day-to-day classroom contact.

The sixteen models were divided into four groups, with two males and two females in each group. Each group was taken to a prepared playroom. After familiarizing themselves with the play equipment, the models were allowed to play. Each group was videotaped for fifteen minutes. The videotape was reviewed to determine if all six elements of sociodramatic play (Smilansky, 1968) were present in the play episode. The tape was then edited to ten minutes.

The subjects in the experimental group viewed the four videotapes of peers modeling sociodramatic play. This occurred on four school days preceding data collection. The subjects in the control group viewed ten-minute nature films on the same four days.

The instrument used to assess sociodramatic play was an adaptation of the instrument developed by Smilansky (1968). Three training sessions

were conducted for the two observers. Using the coefficient of agreement, interrater reliability was .95.

Data collection began the first school day following treatment conditions. In groups of four, each subject's sociodramatic play was rated for ten minutes on three days for a total of thirty minutes.

The data were analyzed through a multivariate analysis of variance with the six elements of sociodramatic play as the dependent variables and grade level, sex, and treatment condition as the independent variables. The hypotheses were tested at the .05 level of significance.

Findings

The three-way interaction of grade level, sex, and treatment was not statistically significant.

The two-way interaction of grade level and sex was statistically significant ($p < .02$).

The two-way interaction of sex and treatment was not statistically significant.

The two-way interaction of grade level and treatment was statistically significant ($p < .0002$).

While the three-way interaction was not significant, each independent variable was involved in a significant two-way interaction. This rendered the main effects uninterpretable. However, since grade level was involved in both significant two-way interactions, the data were analyzed by nesting sex and treatment within grade level.

There was a statistically significant difference for treatment conditions among kindergarten subjects ($p < .0001$). Kindergarteners exposed to the modeling videotapes engaged in significantly more sociodramatic play than kindergarteners exposed to nature films.

There was not a statistically significant difference for treatment conditions among first-grade subjects. There was no difference in the sociodramatic play of first graders exposed to the modeling videotapes and first graders exposed to nature films.

There was a statistically significant difference for sex among kindergarten subjects ($p < .0001$). In kindergarten, males engaged in significantly more sociodramatic play than females.

There was no statistically significant difference for sex among first-grade subjects. In first grade, there was no significant difference in the sociodramatic play of males and females.

Conclusions

While differences in sociodramatic play were evident, these differences seemed to be a function of the grade level of the subject. These differences were apparently attributable to the kindergarten subjects in this study.

Kindergarteners exposed to videotapes of peers modeling sociodramatic play engaged in significantly more sociodramatic play than those exposed to nature films. Therefore, peer models may be an effective approach to a play training program in kindergarten.

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